follow-up in subsequent years following a cardiovascular event. First-year costs of the cardiovascular events considered were: myocardial infarction (US$5,026); angina(US$2378); congestive heart failure (US$3314); stroke (US$5006) and peripheral vascular disease (US$2508). The cost of laser intervention was US$4248, while the cost of a cataract operation was US$2916. **CONCLUSIONS:** Costs for treating diabetes-related complications are an important driver of economic burden for DM. Costs presented in this study provide useful inputs for further economic evaluations of DM treatments in Mexico.

PDB47

DIRECT MEDICAL MANAGEMENT COSTS OF DIABETES-RELATED COMPLICATIONS IN ALGERIA

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OBJECTIVES: Diabetes mellitus (DM) represents a challenging problem to healthcare systems globally as it requires a high level of expenditure. In Algeria, nearly US$264 million was spent on DM in 2010; this is expected to rise to US$461 million by 2030. The aim of this study was to collect 2011 direct medical costs of the management and treatment of DM-related complications from the Algerian Social Insurance perspective. **METHODS:** A structured literature search was conducted to search for the published costs of interest but no relevant publications were identified. Consequently, IMS collected the required costs from official sources identified using its local resources. Six groups of costs were created based mainly on type of complications: management costs, cardiovascular complications, renal complications, acute events, eye-disease and neuropathy/foot ulcers which were presented as first-year costs and costs in subsequent years following an event in 2011 US-dollars (1 US$=72.868 AD). **RESULTS:** The highest first year costs were observed in the renal complications group; renal transplantation (US$28,422), continuous ambulatory peritoneal dialysis (US$3,901) and haemodialysis (US$3,742). High annual costs were also associated with the treatment of cardiovascular complications, ranging from US$865 for first-year treatment of myocardial infarction to US$132 for first-year treatment of peripheral vascular disease. Other first-year costs of treating cardiovascular events were: stroke (US$282), congestive heart failure (US$244), and angina (US$395). The cost of an amputation procedure was US$533, excluding the cost of prosthesis (US$618), with a follow-up cost of US$22. The cost of a laser eye procedure was US$48, while the cost of a cataract operation was US$123. **CONCLUSIONS:** The study identified the Social Insurance costs related to treating DM complications which may add to the financial burden on the Algerian health care system. Data from this study may be used further to evaluate the economic impact of DM-related treatments in Algeria.

PDB48

DIRECT MEDICAL MANAGEMENT COSTS OF DIABETES-RELATED COMPLICATIONS IN BRAZIL

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OBJECTIVES: Health care systems in many countries are facing a significant financial burden due to the costs incurred by treating Diabetes mellitus (DM). In Brazil, expenditure on DM care in 2010 was estimated at US$4.3 million and is expected to rise to nearly US$7.2 million by 2030. This study aims to collect up-to-date direct medical costs of managing and treating DM-related complications from the Brazilian health care system perspective. **METHODS:** Most costs were obtained from the Brazilian Ministry of Health and published studies identified through a structured literature search. Pre-2011 costs were inflated using the Consumer Price Index. Costs were categorised in six groups: management costs, cardiovascular complications, renal complications, acute events, eye-disease and neuropathy/foot ulcers. Costs were expressed in 2011 US-dollars in accordance with the average annual exchange rate (1 US$=1.669 BRL) and were reported as per event costs in the first-year of the event and in subsequent years following the event. **RESULTS:** First-year haemodialysis and renal transplantation costs were the highest costs observed overall at US$14,855 and US$14,051, respectively. The highest first-year cost of treating cardiovascular complications was that for myocardial infarction (US$4752). Other first-year costs of treating cardiovascular complications were: congestive heart failure (US$2,852), stroke (US$1812) and angina (US$532). The cost of an amputation procedure was US$3771 without the cost of prosthesis (US$1584). The cost of a laser eye operation was US$2064 and the cataract operation cost was US$507. **CONCLUSIONS:** DM-related complications impose significant costs on the Brazilian health care budget which highlights the importance of conducting economic evaluations to assess the impact of DM-related treatments on treatment costs and health outcomes. Costs from this study can be used to conduct such economic evaluations which provide valuable information to decision makers in the assessment of DM-related treatments.

PDB49

COST BENEFIT ANALYSIS OF A DIABETES PREVENTION PROGRAM IN RURAL KENYA

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OBJECTIVES: In Kenya, diabetes prevalence is comparable to Western countries. In Sub-Saharan countries, the emphasis must be on prevention because the Western model of emphasizing treatment is unaffordable and unachievable. This study is a cost benefit analysis (CBA) of a diabetes prevention program in rural Kenya. **METHODS:** Convenience sample of adult residents from a rural county in Kenya (Kiambu) were randomized to one of two WTP techniques, Structured Haggling (SH) and Payment Card (PC). Program benefits (WTP) were collected via face-to-face interviews using the ex-ante approach. Program costs were estimated based on World Health Organization program cost estimation guidelines for low income countries in Africa, and program costs tabulated in the literature (eg Haddix et al 2006), supplemented expert opinion: diabetes educators at the Kenya Diabetes Management and Information Centre. **RESULTS:** WTP data was collected from 158 rural residents (70% male, 2.5% diabetic,11% own a vehicle and mean monthly expenditures of Ksh10,933 (US2011$ 127.12). Mean annual WTP for the prevention program was Ksh628.75 (US2011$7.30) for PC and Ksh683.97 (US2011$7.95) for SH per respondent per year, p=0.516. Mean annual cost for providing the program to rural residents (assuming 100 clients/week) was Ksh1,228 (US2011$14). Therefore, program cost exceeded the benefit resulting in a negative net social benefit (NSB). **CONCLUSIONS:** Based on WTP (benefit) data, residents valued the diabetes prevention program in rural Kenya. From a societal perspective, however, the costs for implementing the program outweighed the benefits. The evaluated program is a stand-alone project. Policy makers may consider a number of options that can reduce the operating costs of the program including, implementation of the program as part of established diabetes clinics, or administering the services to already gathered groups such as at religious functions: such an approach may result in a positive NSB.

PDB50

LONG-TERM CLINICAL AND ECONOMIC BENEFIT ASSOCIATED WITH LIRAGLUTIDE VERSUS SITAGLIPTIN THERAPY WHEN ADDED TO METFORMIN IN THE TREATMENT OF TYPE 2 DIABETES: A CORE DIABETES MODEL STUDY

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OBJECTIVES: A recent randomized, open-label, parallel group trial showed that liraglutide is superior to sitagliptin for reduction of HbA1c. Although these findings support the use of liraglutide as an effective GLP-1 agent to add to metformin, the value of liraglutide needs to be quantified in the framework of a cost-effectiveness (CE) analysis in a US setting. This current study sets out to assess the long-term CE outcomes of liraglutide vs. sitagliptin based on treatment effects data from the 52-week trial. **METHODS:** The IMS CORE Diabetes Model, a non-product-specific, validated computer simulation model that projects the long-term outcomes related to interventions for type 2 diabetes, is used for simulation over 35 years. Patients were simulated on one of the 3 treatment options: liraglutide 1.2 mg daily, 1.8 mg daily, or sitagliptin 100 mg daily, each used as add-on therapy to metformin. Incremental cost-effectiveness ratios (ICER) were generated for liraglutide 1.2 mg versus sitagliptin and liraglutide 1.8 mg versus sitagliptin. Transition probabilities, health state utility values and complication costs were obtained from published sources. All outcomes were discounted at 3% per annum, and the analysis was conducted from the perspective of a third-party payer in the US. Sensitivity analyses were performed to test robustness of the base case scenario. **RESULTS:** For liraglutide 1.8 mg versus sitagliptin, the ICER was $37,234 per QALY gained, while for liraglutide 1.2 mg versus sitagliptin, the ICER was $25,742 per QALY gained. In all sensitivity analyses including setting the HbA1c reduction to its 95% lower limit, the ICERs remained below USD 50,000/QALY, a commonly accepted threshold in the United States, except for the shortest time horizon of 10 years. **CONCLUSIONS:** The availability of liraglutide 1.2 mg and 1.8 mg with improved efficacy profiles over sitagliptin could improve patient care, while being cost-effective treatment options as add-on to metformin.

PDB51

MEDICATION ADHERENCE AND MEDICAL COSTS ASSOCIATED WITH EXENATIDE BID VERSUS LIRAGLUTIDE: A RETROSPECTIVE DATABASE ANALYSIS

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OBJECTIVES: Although, safety and efficacy of exenatide BID (exenatide) and liraglutide for treating type 2 diabetes (T2D) has been demonstrated in trials, their comparative economic benefits are unknown. This study examined cost offsets and medication adherence with use of exenatide versus liraglutide in managed care population. **METHODS:** A retrospective cohort analysis was conducted using the LifeLink database, comprising adult patients with T2D who initiated exenatide (n=2383) or liraglutide (n=1535) between January 1, 2010 and June 30, 2010 and with 6 months pre- and post-index continuous eligibility. Patients were propensity score matched to control for on baseline differences. Medication adherence was measured using the proportion of days covered (PDC). The paired ^{t}-test and McNemar's test were used to compare outcomes. **RESULTS:** Matched exenatide and liraglutide cohorts (n=1347 pairs) had comparable age (54 vs. 53 years), gender (55% vs. 57% female), and comorbidities (86% vs. 86%). In the 6-month follow-up, exenatide and liraglutide patients had similar mean total costs ($6688 vs. $7346). Significant cost savings were observed in mean total pharmacy costs ($2925 vs. $3272, P <0.001). There were no significant differences in mean total outpatient ($2541 vs. $3050) or inpatient ($1222 vs. $1025) costs. Among patients who initiated liraglutide, those on 1.8 mg doses (n=638) had significantly higher mean total costs than those on 1.2 mg doses (n=438) ($8046 vs. $6737, P = 0.043) due to higher mean total pharmacy costs in the 1.8 mg cohort ($4017 vs. $3295, P <0.001); 35% higher mean drug cost for liraglutide claims in the 1.8 mg cohort largely accounted for this difference ($1876 vs. $1390, P <0.001). There was no significant difference in medication adherence between groups (mean PDC: exenatide 56% vs. liraglutide 57%). **CONCLUSIONS:** Patients initiating exenatide versus liraglutide for the management of T2D had